IN THE CLAIMS:

Please cancel claims 1-49, 52, 64 and 66-69 without prejudice.

Please add new clams 74-97.

Please amend claims 50, 51, 53-57 and 61 as follows:

This listing of claims will replace all prior versions, and listings, of claims in the application.

STATUS OF CLAIMS

Claims 1-49 **(Cancelled)**

50. **(Currently amended)** A method of screening for anticancer activity comprising: (a) providing a cell that expresses a cancer associated (CA) gene encoding an expression product comprising a nucleotide sequence at least 95% sequence identical to a sequence of SEQ ID NO:43 ~~encoded by a nucleic acid sequence selected from the group consisting of the sequences SEQ ID NOS: 4, 16, 26, 34, 42, 54, 70, 80, 92, 108, 114, 120, 130, 142, and 148 shown in Tables 1-15~~, or fragment thereof; (b) ~~contacting a tissue sample derived from a cancer cell with an~~ comparing the level of the expression product in a sample comprising the cell in the presence and absence of an anticancer drug candidate; and (c) monitoring an effect of the anticancer drug candidate on an expression of the CA polynucleotide in the tissue sample, wherein a difference of at least 50% in the levels of the expression product in the presence of the anticancer drug candidate compared to the levels of the expression product in the absence of the anticancer drug candidate indicates that the anticancer drug candidate has anticancer activity.

51. **(Currently amended)** The method of screening for anticancer activity according

to claim 50, wherein the CA gene encodes an expression product comprising a nucleotide sequence of SEQ ID NO:43 ~~comprises at least one nucleic acid sequence selected from the group consisting of the sequences SEQ ID NOS: 5, 7, 9, 17, 19, 27, 29, 35, 37, 43, 45, 47, 49, 55, 57, 59, 61, 63, 71, 73, 75, 81, 83, 85, 87, 93, 109, 115, 121, 123, 125, 131, 135, 137, 143, 149, 151, 153, 155, 157, 159, 161, 163, 165, and 167 shown in Tables 1-15~~.

Claim 52 **(Cancelled)**

53. **(Currently amended)** The method of screening for anticancer activity according to claim 51, wherein the drug candidate is an inhibitor of transcription ~~and further wherein the nucleic acid sequence is selected from the group consisting of SEQ ID NOS: 5, 7, 9, 17, 19, 27, 29, 35, 37, 43, 45, 47, 49, 55, 57, 59, 61, 63, 71, 73, 75, 81, 83, 85, 87, 93, 109, 115, 121, 123, 125, 131, 135, 137, 143, 149, 151, 153, 155, 157, 159, 161, 163, 165, and 167 shown in Tables 1-15~~.

54. **(Currently amended)** A method for detecting colon, breast or prostate cancer associated with expression of a polypeptide in a patient ~~test cell~~ sample, comprising the steps of: (i) detecting a level of expression of at least one polypeptide encoded for by an expression product comprising a nucleotide sequence at least 95% identical to SEQ ID NO:43 ~~selected from the group consisting of SEQ ID NOS: 6, 8, 10, 18, 20, 28, 30, 36, 38, 44, 46, 48, 50, 56, 58, 60, 62, 64, 72, 74, 76, 82, 84, 86, 88, 94, 110, 116, 122, 124, 126, 132, 134, 136, 138, 144, 150, 152, 154, 156, 158, 160, 162, 164, 166, and 168 shown in Tables 1-15~~, or a fragment thereof; and (ii) comparing the level of expression of the polypeptide in the ~~test~~ patient sample with a level of expression of polypeptide in a ~~normal cell~~ control sample, wherein an altered level of expression of the polypeptide in the patient ~~test cell~~ sample relative to the level of polypeptide expression in the ~~normal cell~~ control sample is indicative of the presence of colon, breast or prostate cancer in

the patient ~~test cell~~ sample.

55. **(Currently amended)** A method for detecting cancer associated with expression of a polypeptide in a patient ~~test cell~~ sample, comprising the steps of: (i) detecting a level of activity of at least one polypeptide encoded for by an expression product comprising a nucleotide sequence at least 95% identical to SEQ ID NO:43 ~~selected from the group consisting of SEQ ID NOS: 6, 8, 10, 18, 20, 28, 30, 36, 38, 44, 46, 48, 50, 56, 58, 60, 62, 64, 72, 74, 76, 82, 84, 86, 88, 94, 110, 116, 122, 124, 126, 132, 134, 136, 138, 144, 150, 152, 154, 156, 158, 160, 162, 164, 166, and 168 shown in Tables 1-15~~, or a fragment thereof, wherein said activity corresponds to at least one activity for the polypeptide listed in Table 17; and (ii) comparing the level of activity of the polypeptide in the patient ~~test~~ sample with a level of activity of polypeptide in a ~~normal cell~~ control sample, wherein an altered level of activity of the polypeptide in the patient ~~test cell~~ sample relative to the level of polypeptide activity in the control ~~normal cell~~ sample is indicative of the presence of colon, breast or prostate cancer in the patient ~~test cell~~ sample.

56. **(Currently amended)** A method for detecting cancer associated with the presence of an antibody in a patient ~~test serum~~ sample, comprising the steps of: (i) detecting a level of an antibody against an antigenic polypeptide encoded for by an expression product comprising a nucleotide sequence at least 95% identical to SEQ ID NO:43 ~~selected from the group consisting of SEQ ID NOS: 6, 8, 10, 18, 20, 28, 30, 36, 38, 44, 46, 48, 50, 56, 58, 60, 62, 64, 72, 74, 76, 82, 84, 86, 88, 94, 110, 116, 122, 124, 126, 132, 134, 136, 138, 144, 150, 152, 154, 156, 158, 160, 162, 164, 166, and 168 shown in Tables 1-15, or antigenic fragment thereof~~; and (ii) comparing said level of said antibody in the patient ~~test~~ sample with a level of said antibody in a ~~the~~ control sample, wherein an altered level of antibody in said patient ~~test~~ sample relative to the level of antibody in the control sample is indicative of the presence of colon, breast or prostate cancer in the patient ~~test serum~~ sample.

57. **(Currently amended)** A method for screening for a bioactive agent capable of modulating the activity of a CA protein (CAP), wherein said CAP is encoded by an expression product comprising a nucleotide sequence at least 95% identical to SEQ ID NO:43 ~~a nucleic acid comprising a nucleic acid sequence selected from the group consisting of the polynucleotide sequences SEQ ID NOS: 5, 7, 9, 17, 19, 27, 29, 35, 37, 43, 45, 47, 49, 55, 57, 59, 61, 63, 71, 73, 75, 81, 83, 85, 87, 93, 109, 115, 121, 123, 125, 131, 135, 137, 143, 149, 151, 153, 155, 157, 159, 161, 163, 165, and 167 shown in Tables 1-15~~, said method comprising: a) combining said CAP and a candidate bioactive agent; and b) determining the effect of the candidate agent on the bioactivity of said CAP.

58. **(Original)** The method of screening for the bioactive agent according to claim 57, wherein the bioactive agent affects the expression of the CA protein (CAP).

59. **(Original)** The method of screening for the bioactive agent according to claim 57, wherein the bioactive agent affects the activity of the CA protein (CAP), wherein such activity is selected from the activities listed in Table 17.

60. **(Original)** The method of screening for the bioactive agent according to claim 57, wherein the bioactive agent is a modulator of an activity selected from the group consisting of: sialyl transferase, tumor suppressor, low density lipoprotein receptor, calcium binding, cell adhesion, signalling, protein kinase receptor, and signal transduction.

61. **(Currently amended)** A method for diagnosing cancer comprising: a) determining the ~~expression~~ level of an expression product comprising a nucleotide sequence at least 95% identical to SEQ ID NO:43 ~~one or more genes comprising a nucleic acid sequence selected from~~

~~the group consisting of the human genomic and mRNA sequences outlined in Tables 1-15,~~ in a first tissue type of ~~a first~~ an individual; and b) comparing ~~said expression of said gene(s)~~ the level of the expression product in (a) to the level of the expression product in a normal control, ~~from a second normal tissue type from said first individual or a second unaffected individual~~; wherein an increase of at least 50% between the level of the expression product in (a) and the level of the expression products in the normal control ~~a difference in said expression~~ indicates that the ~~first~~ individual has cancer.

62 . **(Original)** A method for treating cancers comprising administering to a patient an inhibitor of a CA protein (CAP), wherein said CAP is encoded by a nucleic acid comprising a nucleic acid sequence selected from the group consisting of the human nucleic acid sequences in Tables 1-15.

63 . **(Original)** The method for treating cancers according to claim 62, wherein the inhibitor of a CA protein (CAP) binds to the CA protein.

Claim 64 **(Cancelled)**

65 . **(Original)** The method for treating cancers according to claim 62, wherein the inhibitor is a low density lipoprotein receptor antagonist and further wherein the CAP sequence is selected from the group consisting of SEQ ID NOS: 28, 30, 44, 46, 48, 50, 122, 122, and 124 shown in Tables 1-15.

Claims 66-69 **(Cancelled)**

70 . **(Original)** The method for treating cancers according to claim 62, wherein the

inhibitor is a modulator of signalling or signal transduction and further wherein the CAP sequence is selected from the group consisting of SEQ ID NOS: 28, 30, 38, 44, 46, 48, 50, 56, 58, 60, 62, 64, 72, 74, 76, 94, 116, and 144 shown in Tables 1-15.

71. **(Original)** A method for inhibiting expression of a cancer associated (CA) gene in a cell comprising: contacting a cell expressing a CA gene with a double stranded RNA comprising a sequence capable of hybridizing to a cancer associated (CA) mRNA corresponding to the polynucleotide sequences of SEQ ID NOS: 5, 7, 9, 17, 19, 27, 29, 35, 37, 43, 45, 47, 49, 55, 57, 59, 61, 63, 71, 73, 75, 81, 83, 85, 87, 93, 109, 115, 121, 123, 125, 131, 135, 137, 143, 149, 151, 153, 155, 157, 159, 161, 163, 165, and 167 shown in Tables 1-15, in an amount sufficient to elicit RNA interference; and inhibiting expression of the CA gene in the cell.

72. **(Original)** The method of claim 71, wherein the double stranded RNA is provided by introducing a short interfering RNA (siRNA) into the cell by a method selected from the group consisting of transfection, electroporation, and microinjection.

73. **(Original)** The method of claim 71, wherein the double stranded RNA is provided by introducing a short interfering RNA (siRNA) into the cell by an expression vector.

74. **(New)** A method for diagnosing colon, breast or prostate cancer comprising comparing a level of very low density lipoprotein receptor (VLDLR) in a patient sample comprising colon, breast or prostate tissue to the level of the VLDLR mRNA in a normal control; wherein an increase of at least 50% from the level in the patient sample relative to the normal control indicates that the patient has or is predisposed to colon, breast or prostate cancer.

75. **(New)** The method of claim 74 wherein the VLDLR mRNA comprises a nucleotide

sequence at least 95% identical to a sequence of SEQ ID NO:43, said mRNA encoding a receptor which binds lipoprotein (LDL).

76. (New) The method of claim 74 wherein the VLDLR mRNA comprises a nucleotide sequence at least 98% identical to a sequence of SEQ ID NO:43, said mRNA encoding a receptor which binds lipoprotein (LDL).

77. (New) The method of claim 74 wherein the VLDLR mRNA comprises SEQ ID NO:43.

78. (New) The method of claim 74 wherein an increase of at least 100% from the level of the VLDLR mRNA in the patient sample relative to the normal control indicates that the patient has or is predisposed to colon, breast or prostate cancer.

79. (New) A method for diagnosing colon, breast or prostate cancer comprising detecting evidence of differential expression of very low density lipoprotein receptor (VLDLR) in a patient sample, wherein evidence of differential expression of VLDLR indicates that the patient has colon, breast or prostate cancer.

80. (New) The method of claim 79 wherein evidence of differential expression is detected by measuring the level of a VLDLR expression product.

81. (New) The method of claim 80 wherein the expression product is a protein or mRNA.

82. (New) The method of claim 81 wherein the level of expression of protein is measured using an antibody which specifically binds to VLDLR.

83. (New) The method of claim 82 wherein the antibody is linked to an imaging agent.

84. (New) The method of claim 80 wherein the level of a VLDLR expression product in the patient sample is compared to a control.

85. (New) The method of claim 84 wherein the control comprises normal colon, breast or prostate tissue.

86. (New) The method of claim 84 wherein the level of the expression product in the patient sample is increased at least 200% relative to the control.

87. (New) The method of claim 79 wherein evidence of differential expression is detected by measuring the level of a VLDLR expression product at least 95% identical to a sequence of SEQ ID NO:43, said expression product encoding a receptor which binds lipoprotein (LDL).

88. (New) The method of claim 79 wherein evidence of differential expression is detected by measuring the level of a VLDLR expression product at least 98% identical to a sequence of SEQ ID NO:43, said expression product encoding a receptor which binds lipoprotein (LDL).

89. (New) The method of claim 79 wherein evidence of differential expression is detected by measuring the level of a VLDLR expression product comprising SEQ ID NO:43.

90. (New) A method of diagnosing colon, breast or prostate cancer in a patient comprising:

(a) contacting a polynucleotide that hybridizes under highly stringent conditions to a nucleotide sequence comprising SEQ ID NO:43 with nucleic acids of a patient colon, breast or prostate sample under binding conditions suitable to form a duplex; and

(b) comparing the amount of the duplex formed to the amount of duplex formed when the polynucleotide is contacted with nucleic acids of a non-cancerous colon, breast or prostate control,

wherein increased levels of the amount of duplex formed upon contacting said polynucleotide with said nucleic acids of the patient sample compared to the amount of duplex formed upon contacting said polynucleotide and said nucleic acids of the non-cancerous control indicates that the patient has colon, breast or prostate cancer.

91. (**New**) The method of claim 90 wherein hybridization is performed at 50°C in 5 X SSC (9 mM saline /0.9 mM sodium citrate).

92. (**New**) The method of claim 90 wherein hybridization is performed at 60°C in 5 X SSC (9 mM saline /0.9 mM sodium citrate).

93. (**New**) The method of claim 61, wherein the nucleotide sequence has a sequence identity of at least about 98% with a sequence of SEQ ID NO:43, or a full complement thereof.

94. (**New**) The method of claim 61, wherein said nucleotide sequence comprises a sequence of SEQ ID NO:43, or a full complement thereof.

95. (**New**) The method of claim 61, wherein the difference between the level of the expression products in (a) and the level of the expression product in the normal control is at least 100%.

96. (**New**) The method of claim 61, wherein the difference between the level of the expression products in (a) and the level of the expression product in the normal control is at least

150%.

97. (New) The method of claim 61, wherein the cancer is colon, breast or prostate cancer.